

67875

S/020/60/130/06/004/059

16(1) 16.4000

AUTHORS: Melentsov, A.A., and Murayev, E.B.

TITLE: On the Theory of Summation of Double Series by Borel's Methods

PERIODICAL: Doklady Akademii nauk SSSR, 1960, Vol 130, Nr 6, pp 1193-1195 (USSR)

ABSTRACT:

Let $\Delta_{mn} = \sum_{i=0}^m \sum_{k=0}^n a_{ik}$ be a partial sum of the series

$$(1) \quad \sum_{i,k=0}^{\infty} a_{ik}.$$

Let the series $\Delta(x,y) = \sum_{i,k=0}^{\infty} \Delta_{ik} \frac{x^i y^k}{i!k!}$ converge for all $x \geq 0, y \geq 0$.

The series (1) is B_{λ} -summable with the sum S if

$\lim_{(x,y)_{\lambda} \rightarrow \infty} e^{-(x+y)} \Delta(x,y) = S$, where $(x,y)_{\lambda} \rightarrow \infty$ means that $x \rightarrow \infty$,

$y \rightarrow \infty$ in the sector $\lambda \leq \frac{y}{x} \leq \frac{1}{\lambda}$ ($0 < \lambda < 1$). (1) is called B -

summable with the sum S if $\lim_{x \rightarrow \infty, y \rightarrow \infty} e^{-(x+y)} \Delta(x,y) = S$. Let

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On the Theory of Summation of Double Series by Borel's Methods S/020/60/130/06/004/059

$a(x,y) = \sum_{i,k=0}^{\infty} a_{ik} \frac{x^i y^k}{i!k!}$ be an entire function. Let $\phi(x,y) =$

$= \int_0^x \int_0^y e^{-(t+\tau)} a(t,\tau) dt d\tau$. The series (1) is B'_{λ} -summable with the

sum S if $\lim_{(x,y) \rightarrow \infty} \phi(x,y) = S$. If $\lim_{x \rightarrow \infty, y \rightarrow \infty} \phi(x,y) = S$, then (1) is called B' -summable.

Theorem 1: Let (1) converge, let it have the sum S and let it satisfy the conditions

$$(4) \quad \left| \sum_{k=0}^{\infty} a_{ik} \frac{y^k}{k!} \right| \leq M_i e^{(1+\lambda')y},$$

$$(5) \quad \left| \sum_{i=0}^{\infty} a_{ik} \frac{x^i}{i!} \right| \leq N_k e^{(1+\lambda')x},$$

where $M_i, N_k, \lambda' < 1$ are positive numbers which do not depend on x, y . Then (1) is B_{λ} -summable with the sum S for $\lambda > \lambda'$.

Card 2/3

MURAYEV, E.B.

Theory of the summation of double series by Euler's methods.

Sib. mat. zhur. 2 no.6:884-890 N-D '61. (MIRA 15:7)

(Series, Infinite)

MURAYEV, E.B.

Generalization of Borel's summation methods. Izv. vys. ucheb.
zav.; mat. no.1:101-108 '62. (MIR' 15:1)

1. Ural'skiy gosudarstvennyy universitet imeni A.M. Gor'kogo.
(Series, Divergent)

MURAYEV, E.B.

Summability of a Borel power series at the boundary of the
convergence circle. Izv.vys.ucheb.zav.; mat. no.2:110-113 '62.
(MIRA 15:8)

1. Ural'skiy gosudarstvennyy universitet imeni A.M.Gor'kogo.
(Series) (Convergence)

MELENTSOV, A.A.; MURAYEV, E.B.

Summation of the iterations of linear operators. Izv. Akad. Nauk
SSR. Ser. fiz.-mat. nauk 16 no.1:3-12 '63. (MIRA 16:3)

1. Ural'skiy gosudarstvennyy universitet imeni A.M.Gor'kogo.
(Topology) (Operators (Mathematics))

KREMNEV, N.N., kandidat meditsinskikh nauk; MURAZIZOV, K.D.

Localized fibrous osteodystrophy (osteoblastoclastoma) of the accessory sinuses of the nose, the facial bones, and of the cranium. Vest.oto-rin 17 no.4:46-49 J1-Ag '55. (MLRA 8:10)

1. Iz kafedry bolezney ukha, gorla i nosa (zav.-prof.S.I. Shumskiy) Tashkentskogo meditsinskogo instituta.

(OSTEITIS FIBROSA,

cranium, paranasal sinuses & facial bones)

(CRANIUM, diseases,

fibrous osteodystrophy of cranial & facial bones & paranasal sinuses)

KOROLEWA, N.; MURAZJAN, A.

Medical care of industrial workers. Zdrowie pub., Warszawa
no.6:425-429 Nov-Dec 54.

1. Z Oddzialu opieki nad robotnikami przemyslawymi Ministerstwa
zdrowia ZSRR - Naczelnik oddzialy N.Koroliewa
(INDUSTRIAL HYGIENE
in Russia)

MURAZIAN A.G.
KOROLEVA, N.P.; MURAZIAN, A.G.

Medical and sanitary services for workers of industrial plants.
Sov. zdav. 13 no.4:12-26 J1-Ag '54. (MIRA 7:9)

1. Iz otdela meditsinskogo obsluzhivaniya promyshlennykh rabochikh
(nach. N.P.Koroleva) Ministerstva zdavookhraneniya SSSR.
(INDUSTRIAL HYGIENE,
in Russia)

MURAZIAN, A.G.

Trachoma and its control. Med.sestra 17 no.2:24-25 # '58. (MIRA 11:3)

1. Glavnaya meditsinskaya inspeksiya Ministerstva zdravookhraneniya
SSSR, Moskva.
(CONJUNCTIVITIS, GRANULAR)

MURAZYAN Araks Grigor'yevich; RABINOVICH, M.G., red.; BEL'CHIKOVA, Yu.S.,
tekhn. red.

[Prevention of trachoma] Preduprezhdenie trakhomy. Moskva, Gos. izd-
vo med. lit-ry Medgiz, 1960. 13 p. (MIRA 14:7)
(CONJUNCTIVITIS, GRANULAR)

MURAZYAN, R. I.

Military Faculty, Central Inst for the Advanced Training of Physicians.

MURAZYAN, R. I.- "Intra-osteal local anesthesia in firearm wounds to the extremities."
Military Faculty, Central Inst for the Advanced Training of Physicians. Moscow,
1956.

(Dissertation for the Degree of Candidate in Medical Sciences)

SO: Knizhnaya Letopis', No. 20, 1956

MURAZYAN, R.I., kandidat meditsinskikh nauk

Intraosseous anesthesia in gunshot wounds of the limbs. Voen.-med.
zhur. no.6:37-41 Je '56. (MLRA 9:9)
(LOCAL ANESTHESIA)
(EXTREMITIES (ANATOMY)--WOUNDS AND INJURIES)

MURAZYAN, R.I.

MURAZYAN, R.I., kand.med.nauk

Trocar with fixed hod. Voen.-med.zhur. no.8:87-88 Ag '57. (MIRA 10:12)

(PUNCTURES,

trocar with fixed stylet (Rus))

MURAZYAN, R.I.
GROZDOV, D.M., prof.; AGRANENKO, V.A.; FROM, A.A.; MURAZYAN, R.I.

Polyglucin, a new plasma substitute, and its use in surgery [with summary in English]. Khirurgiia 33 no.7:31-34 Ji '57. (MIRA 10:11)

1. Iz khirurgicheskoy kliniki (zav. - prof. D.M.Grozlov) TSentral'nogo ordena Lenina instituta gematologii i perelivaniya krovi (dir. - deystvitel'nyy chlen AMN SSSR prof. A.A.Bagdasarov)

(PLASMA SUBSTITUTES, ther. use,
polyglucin, in surg.)

FROM, A.A., kand.med.nauk; MURAZYAN, B.I., kand.med.nauk (Moskva)

Reactivity of the organism following the use of polyglucin in clinical practice. Klin.med. 35 no.7:57-59 J1 '57. (MIRA 10:11)

1. Iz khirurgicheskoy kliniki (zav. - prof. D.M.Grozdov) Tsentral'nogo ordena Lenina instituta gematologii i perelivaniya krovi Ministerstva zdravookhraneniya SSSR (dir. - chlen-korrespondent AMN SSSR prof. A.A.Bagdasarov).

(DEXTRAN, related compounds,
polyglucine, reactions of organism (Rus))

MURAZYAN, R.I., kand.med.nauk (Moscow)

Nonparasitic cysts of the spleen. Vrach.delo no.4:391-393 Ap'58
(MIRA 11:6)

1. Khirurgicheskaya klinika (zav. - prof. D.M. Grozdov)
TSentral'nogo ordena Lenina instituta gematologii i perelivaniya
krovi.

(SPLEEN--TUMORS)

MURAZYAN, R.I., kand.med.nauk

Method of intraosseous novocaine anesthesia in operations on the
extremities. Sov.med.22 no.3:128-130 Mr '58. (MIRA 11:4)

1. Iz khirurgicheskoy kliniki (zav. - prof. D.M.Grozlov) Tsentral'-
nogo ordena Lenina instituta gematologii i perelivaniya krovi (dir.
chlen-korrespondent Akademii meditsinskikh nauk SSSR prof. A.A.
Bogdasarov)

(PROCAINE, anesth. & analgesia
intra-osseous in surg. of extremities (Rus))
(EXTREMITIES, surg.
anesth., intra-osseous procaine (Rus))

MURAZYAN, R.I.

COUNTRY :USSR
 CATEGORY :Human and Animal Physiology, Blood
 ABS. JOUR. : RZhBiol., No. 5 1959, No. 21967
 AUTHOR :From, A.A.; Murazyan, R.I.
 INST. :--
 TITLE :Clinical Reactions to Polyglucine.

T

ORIG. PUB. :Klinich. meditsina, 1957, 35, No. 7, 57--59

ABSTRACT : Analysis of 533 transfusions of 85 different lots of polyglucine showed that the blood-substitute was not primarily reactogenic or anaphylactogenic. Slight reactions were noted in 3 cases at the initial transfusion (0.5%). No pathological changes in the organs were detected in association with utilization of polyglucine. Intravenous injection of large doses of polyglucine (up to 2000 ml) into 273 patient failed to produce hemophilia in a single case. Polyglucine transfusions resulted in a temporary shortening of blood clotting, which returned to normal after 3 to 24 hours.

Card: 1/1

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EXCERPTA MEDICA Sec 9 Vol 13/6 Surgery June 59
3082. INTRAOSSEOUS NOVOCAIN ANAESTHESIA IN OPERATIONS ON EXTREM-
ITIES(Russian text) - Murazyan R.I. - SOV. MED. 1958, 3(128-130) Tables 2
Intraosseous novocain anaesthesia was used in 286 patients with fractured extrem-
ities. The solution used was 0.25% or 0.5% up to 150 ml.; 100,000 to 400,000 U. of
penicillin was added to the solution. Anaesthesia was good in 85% and sufficient in
12%. No anaesthesia was noted in 3%.
Manicki - Warsaw

17(2)

30V/177-58-9-18/51

AUTHOR: Murazyan, R.I., Candidate of Medical Sciences

TITLE: The Intraosteal Application of Penicillin in Open Fractures of the Bones of the Extremities

PERIODICAL: Voenno-meditsinskiy zhurnal, 1958, Nr 9, pp 63-64 (USSR)

ABSTRACT: Many surgeons including F.L. Leont'yev, V.I. Spasov, M.I. Andina, and Gerrel', have obtained good results with intraosteal penicillin injections in various parts of the bones. I.L. Krupko advocates intraosteal anesthesia combined with penicillin in injuries of the extremities. The author of this article successfully performed intraosteal injections of penicillin combined with novocain for the purpose of anesthesia, prophylaxis of purulation and healing of wounds in 54 patients. Based on his results, he concludes that intraosteal application of penicillin combined with intra-

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The Intraosteal Application of Penicillin in Open Fractures of the
Bones of the Extremities

SCV/177-58-9-12/51

muscular injection in the surgical treatment of wounds
allows primary sutures and gives good results in heal-
ing bullet fractures of bones of the extremities.
There is 1 table.

Card 2/2

KOZINEB, V.B., kand.med.nauk; MUHAZIAN, R.I., kand.med.nauk

Plasma substitute polyglucin. Voen.-med.shur. no.6:51-55
Je '59. (MIRA 12:9)

(DEXTRAN, related cpds.
polyglucin (Rus))

MURAZYAN, R.I., kand.med.nauk

Intraosseous anesthesia in operations in patients with traumatic injuries of the extremities. Sov.med. 23 no.11:130-133 N '59.

(MIRA 13:3)

1. Iz khirurgicheskogo otdeleniya (zaveduyushchiy - prof. D.M. Gromdov) Tsentral'nogo ordena Lenina instituta gematologii i perelivaniya krovi (direktor - deystvitel'nyy chlen AMN SSSR prof. A.A. Bagdasarov) Ministerstva zdavookhraneniya SSSR.

(EXTREMITIES wds. & inj.)

(ANESTHESIA)

MURAZYAN, Rafael' Ivanovich; BALDINA, N.F., tekhn. red.

[Intraosseous anesthesia in gunshot wounds of the extremities]
Vnutrikostnoe obezbolivanie pri ognestrel'nykh raneniiakh ko-
nechnostei. Moskva, Gos. izd-vo med. lit-ry Medgiz, 1960. 62 p.
(MIRA 14:8)
(ANESTHESIA) (EXTREMITIES (ANATOMY))—(WOUNDS AND INJURIES)

FAYNSHTEYN, F.E.; MURAZIAN, R.I.

Use of splenectomy in hypoplastic anemias. Probl.gemat.i perel.
krovi 5 no.1:46-52 Ja '60. (MIRA 14:6)

1. Iz TSentral'nogo ordena Lenina instituta gematologii i perelivaniya
krovi (dir. - deystvitel'nyy chlen AMN SSSR prof. A.A.Bagdasarov)
Ministerstva zdravookhraneniya SSSR.
(ANEMIA) (SPLEEN)

TERENT'YEVA, Ye.I.; ZOSIMOVSKAYA, A.I.; MURAZIAN, R.I.

Cytochemical determination of indole derivatives in hemopoietic
elements. Probl. gemat. i perel. krovi 5 no. 12:14-18 '60.

(MIRA 14:1)

(INDOLES) (HEMATOPIETIC SYSTEM)

~~MURAZIN~~, R.I.; CHERTKOV, I.L.

Activity of the properdin system in burns. Khirurgia 36 no. 5:77-81
My '60. (MIRA 14:1)

(PROPERDIN) (BURNS AND SCALDS)

MURAZYAN, R. I.

Anaesthesia in the surgical treatment of burns. Acta chir. plast. 3
no.4:299-304 '61.

1. Central Lenin Institute for Haematology and Blood Transfusion,
Moscow (U.S.S.R.) Director: Prof. A. A. Bagdasarov, Member of the
Acad. Sc. USSR Head of Surgical Clinic: Prof. D.M. Grozdov.

(BURNS surg) (ANESTHESIA)

MURAZIAN, R.I., kand.med.nauk; NIKOLAYEVA, M.I.

Anesthesia in surgical therapy of burns. Khirurgiia 37 no.4:
102-105 '61. (MIRA 14:4)

1. Iz Tsentral'nogo ordena Lenina instituta gematologii i pereli-
vaniya krovi (dir. - deystvitel'nyy chlen AMN SSSR prof. A.A.
Bagdasarov, zav. khirurgicheskoy klinikoy - prof. D.M. Gromdov)
Ministerstvo zdavookhraneniya SSSR.
(BURNS AND SCALDS) (SKIN GRAFTING)

MURAZIAN, R.I., kand.med.nauk; CHERTKOV, I.L., kand.med.nauk (Moskva)

Role of the properdin test in evaluating the body's reaction to
burn trauma. Klin.med. 40 no.10:33-35 O '62. (MIRA 15:12)

1. Iz Tsentral'nogo ordena Lenina instituta gematologii i
perelivaniya krovi (dir. - dotsent A.Ye.Kiselev).
(PROPERDIN) (BURNS AND SCALDS)

MURAZYAN, R.I., kand. med. nauk; GZRASIMOVA, L.I.

Surgical treatment of burns. Khirurgiya 39 no.12:42-47
D '63 (MIRA 18:1)

1. Iz khirurgicheskoy kliniki (zav. - prof. D.M. Grozdov)
TSentral'nogo ordena Lenina instituta gematologii i pere-
livaniya krovi (direktor - dotsent A. Ye. Kiselev).

MURAZYAN, R.I., kand.med.nauk; TROITSKAYA, I.S.

Nonparasitic cysts of the spleen. Khirurgiia No.3:65-68
'63. (MIRA 16:5)

1. Iz Tsentral'nogo ordena Lenina instituta gematologii i pere-
livaniya krovi (direktor-deystvitel'nyy chlen AMN SSSR prof.
A.A.Bagdasarov [deceased] Ministerstva zdravookhraneniya SSSR.
(SPLEEN—TUMORS) (CYSTS)

MURAZYAN R I.

MOORAZYAN, R.I.; GERASSIMOVA, L.I.

Transfusion of blood and blood substitutes in burns shock.
Acta chir. plast. 6 no.1:16-22 '64.

1. Surgical Clinic (head: prof. D.M.Grozlov) Central Lenin
Institute of Haematology and Blood Transfusion, Moscow,
U.S.S.R. Director: doc. A.E.Kisselov.

*

GUREVICH, I.B., prof.; MIRAZYAN, R.I.

Use of radiotherapy in the acute period of burn disease. Med. rad. 2
no.1:20-24 Ja '64. (MIRA 17:2)

1. Tsentral'nyy ordena Lenina institut gematologii i perelivaniya
krovi (dir. - dozent A.Ye. Kiselev), Moskva.

MURAZYAN, R.I.; GERASIMOVA, L.I.

Blood transfusion method of treating shock caused by burns.
Porbl. gemat. i perel. krovi 9 no.4:37-42 Ap '64.

(MIRA 17:11)

1. Khirurgicheskaya klinika (zav. - prof. D.M. Grozdov) Tsentral'-
nogo ordena Lenina instituta gematologii i perelivaniya krovi
(dir. - dotsent A.Ye. Kiselev) Ministerstva zdravookhraneniya
SSSR, Moskva.

VINOGRADOVA, I.L.; MURAZYAN, R.I.; SAFAROVA, A.A.

Dynamics of electrolyte disorders in the burn disease. Probl.
gemat. i perel. krovi 9 no.9:15-18 S '64. (MIRA 18:7)

1. Tsentral'nyy ordena Lenina institut gematologii i perelivaniya
krovi (direktor - dotsent A.Ye.Kiselev) Ministerstva zdorav-
ookhraneniya SSSR, Moskva.

MURAZYAN, R.I.; GERASIMOVA, L.I.; FROM, A.A.

Use of blood substitutes in the treatment of extensive superficial burns. Probl. gemat. i perel. krovi no.3:34-36 '65.

(MIRA 18:10)

1. Khirurgicheskaya klinika (zav. - prof. D.M.Grozdov) Tsentral'nogo ordena Lenina instituta gematologii i perelivaniya krovi (direktor - dotsent A.Ye.Kiselev) Ministerstva zdravookhraneniya SSSR, Moskva.

GUREVICH, I.B., prof.; MURAZYAN, R.M., kand. med. nauk

Changes in the heart in burn disease, Clinicoroentgenologic
study. Sov. med. 27 no.1:37-40 Ja '64. (MIRA 17:12)

1. Tsentral'nyy ordena Lenina institut gematologii i perelivaniya
krovi (direktor - dotsent A.Ye. Kiselev), Moskva.

CZECHOSLOVANIA

PREC, A.; MARCINKO, O.; MURCEK, E.; Neurological Department (Neurologické Oddelení) Head (Vedoucí) Dr A. PREC, and Department of Lung Diseases (Plicní Oddelení) Head (Vedoucí) Dr S. CYPRICH, Military Hospital (Vojenská Nemocnice), Ruzomberok.

"The Role of Respiratory Disturbances in the Pathogenesis of Cerebral Circulatory Insufficiency."

Prague, Ceskoslovenska Neurologie, Vol 30, No 1, Jan 67, pp 7-13

Abstract [Authors' English summary modified]: 25 patients with cerebral circulatory insufficiency were studied. In 19, changes in static and dynamic values were found. In all emphysema could be determined. In 9 cases correlation between the respiratory disturbance and the development of cerebral vascular symptomatology could be determined. Cerebral hemorrhage cases improved when respiratory difficulties were reduced. Importance of treating respiratory disturbances in cases of cerebral circulatory insufficiency is stressed. Favorable influence of aminophylline administration is discussed. 4 figures, 4 western, 7 Czech references. (Manuscript received 3 Aug 65).

1/1

CZECHOSLOVAKIA

VOZENILAK, L.; MENCHE, J.

No affiliation given

Bratislava, Farmaceuticky obzor, No 11 [November] 1966, pp 519-522

"On mechanizing the handling of prescriptions and order forms in
Ostrove."

USSR/Medicine - Biochemistry

FD-2465

Card 1/1 Pub 33-16/24

Author : Murchakova, A. F.

Title : ~~Lipid phosphorus~~ Lipid phosphorus in the liver of the rabbit in normal nutrition and in starvation

Periodical : Fiziol. zhur. 2, 265-272, Mar-Apr 1955

Abstract : In the normal nutritional state, the total phosphorus content in the liver of rabbits varies from 235 to 270 mg %; acid-insoluble phosphorus from 117 to 143 mg % and lipid phosphorus between 84 and 114 mg %. During acute starvation (from 9 to 18 days), the total phosphorus content increases by 8-41%, the acid insoluble fraction by 16 to 86%, and the lipid phosphorus by 20 to 50%. There is a pre-mortal drop of total and lipid phosphorus, but not of the acid insoluble fraction.

Institution: Laboratory of the Biochemistry of Nutrition and Digestion of the Institute of Physiology imeni I. P. Pavlov of the Academy of Sciences USSR, Leningrad

Submitted : July 1, 1952

MURCHAKOVA, A.F., kand,biol.nauk

Excretion of radioactive phosphorus following its administration for
treating chronic myelosis and polycythemia. Voen.-med.shur.no.12:32-35
D'55 (MIRA 12:1)

(PHOSPHORUS--ISOTOPES)

(ERYTHREMIA)

(MARROW--DISEASES)

MURCHAKOVA, A.F.

Lipid phosphorus in a rabbit liver following normal nutrition and fasting. Fiziol.zhur. 41 no.2:265-272 Mar-Apr '55. (MLRA 8:5)

1. Laboratoriya biokhimii pitaniya i pishchevareniya Instituta fiziologii im. I.P.Pavlova AN SSSR, Leningrad.

(LIVER, metabolism,

phospholipids, eff. of fasting in rabbits)

(PHOSPHOLIPIDS, metabolism,

liver, eff. of fasting in rabbits)

(FASTING, effects,

on liver phospholipids in rabbits)

SHURYGIN, D.Ya., dotsent; MURCHAKOVA, A.F., kand.biologicheskikh nauk;
BELOV, N.A. (Leningrad)

Mosinopenic reaction following stimulation of adrenocortical function;
experimental and clinical investigations [with summary in English,
p.124] J1-Ag '57. (MIRA 10:12)

1. Iz kafedry fakul'tetskoy terapii (nach. - prof. V.A.Beyyer)
Voyenno-meditsinskoy ordena Lenina akademii imeni S.M.Kirova.

(BURNS, physiology,

eosinophil count & urinary 17-ketosteroids (Rus))

(EOSINOPHIL COUNT, in various diseases,

burns, with urinary 17-ketosteroids changes (Rus))

(17-KETOSTEROIDS, in urine,

in burns, with eosinophil count changes (Rus))

SHURYGIN, D.Ya., dots., MURCHAKOVA, A.F. (Leningrad)

Basal metabolism and radioactive iodine test in patients with
leukemia and lymphogranulomatosis; preliminary report.
Klin.med. 36 no.7:99-104 J1 '58 (MIRA 11:11)

1. Is kafedry fakul'tetskoy terapii No.1 (Nach. - prof. V.A.
Beyer) Voenno-meditsinskiy ordena Lenina akademii imeni
S.M. Kirova.

(LEUKEMIA, metab.

basal metab. & radioiodine uptake (Rus))

(HODGKIN'S DISEASES, metab.

same (Rus))

(THYROID GLAND, metab.

radioiodine uptake in leukemia & Hodgkin's dis. (Rus))

(BASAL METABOLISM, in various dis.

Hodgkin's dis. & leukemia (Rus))

MURCHAKOVA, A.F., kand.biol.nauk

Prothrombin of the blood following treatment of plicythemia and
leucoses with radioactive phosphorus and X-rays. Voen.-med.zhur.
no.8:28-31 Ag'58. (MIRA 16:7)

(ERYTHREMIA) (PROTHROMBIN) (LEUKEMIA)

(PHOSPHORUS—ISOTOPES)

(X-RAYS—THERAPEUTIC USE)

BLESTKINA, T.G.; MITROPOL'SKIY, A.N.; MURCHAKOVA, A.F. (Leningrad)

Absorption of radioactive iodine by the thyroid gland in patients with mitral defects of a rheumatic nature. Vrach.delo no.11:1207 N '59. (MIRA 13:4)

1. Khirurgicheskaya klinika dlya usovershenstvovaniya vrachev (nachal'nik - prof. P.A. Kupriyanov) i klinika fakul'tetskoy terapii No.1 (nachal'nik - prof. V.A. Beyyer) Voenno-meditsinskoy ordena Lenina Akademii im S.M. Kirova.

(THYROID GLAND) (IODINE--ISOTOPES) (HEART--DISEASES)

MITROPOL'SKIY, A.H., kand.med.nauk; MURCHAKOVA, A.F., kand.biolog.nauk
(Leningrad)

Study of thyroid function in atherosclerosis. Klin.med. 37
no.6:89-92 Je '59. (MIRA 12:8)

1. Iz kafedry fakul'tetskoy terapii (nach. - prof.V.A.Beyer)
Voyenno-meditsinskoy ordena Lenina akademii imeni S.M.Kirova.
(ARTERIOSCLEROSIS, physiol.
thyroid gland (Rus))
(THYROID GLAND, physiol.
in arteriosclerosis (Rus))

MURCHAKOVA, A.F.; DYGIN, V.P.

Relation of changes in serum protein fractions to the presence
of autoimmune antibodies in some diseases of the blood system.
Probl.gemat.i perel.krovi no.6:18-22 '61. (MIRA 17:18)

1. Iz kliniki fakul'tetskoy terapii No.1 (nach. - prof. V.A.
Beyrer) Voenno-meditsinskoy ordena Lenina akademii med. S.S.
Kirova.

(BLOOD PROTEINS)

(BLOOD--DISEASES)

(ANTIGENS AND ANTIBODIES)

MURCHAKOVA, A.F.

Some biochemical indices of cadaver bone marrow. Probl. gemat. i
perel. krovi 9 no.1:31-35 Ja '64. (MIRA 18:1)

1. Iz kafedry fakul'tetskoy terapii (nachal'nik - prof. V.A. Beyer)
Voyenno-meditsinskoy ordena Lenina akademii imeni S.M. Kirova.

MURCHENKO, L.G., kapitan 3-go ranga

Determining the position of a ship by natural radar orientation
points. Mor. sbor. 46 no.8:69-70 Ag '63. (MIRA 16:10)

(Radar in navigation)

MURCHICH, V.I., inzh.

Comments on the article "Device for measuring soil temperature."
Avtom. telem. i sviaz' 8 no. 3:40-41 Mr '64. (MIRA 17:5)

HORNUNG, Stanislaw; MURCZYNSKA, Halina

Paraaminosalicylic acid and isonicotinic acid hydrazide in the treatment of pulmonary tuberculosis. Gruslica 24 no.5:325-334 May 56.

1. Z Kliniki Ftyszjetrycznej A.M. w Krakowie. Kierownik: prof. dr. St. Hornung, Krakow, ul. Skawinska 8.

(PARAAMINOSALICYLIC ACID, therapeutic use,
pulm. tuberc. (Pol))

(ISONIAZID, therapeutic use,
same)

NIKODEWICZ, Eugeniusz; CZAJKA, Stanislaw; GEBAUEROWA, Maria;
GRZEGORCZYKOWA, Zofia; KRAKOWSKA, Maria; LACHOWICZ, Wanda;
LASZCZKA, Czeslaw; MURCZYNSKA, Halina; OCZKOWSKA, Maria;
PIENIQZEK, Janusz; STANOCH, Adolf

Pneumothorax tuberculosis dispensaries in Cracow, 1943-1954.
Gruzlica 24 no.8:637-652 Aug 56.

1. Z Działu Terenowego Instytutu Gruzlicy w Krakowie Dyrektor:
prof. dr. St. Hornung i z Poradni Przeciwgruzliczych w Krakowie
Kierownicy: dr. Z. Grzegorzczkowska, dr. M. Krakowska, dr. Dz. Laszciska,
dr. K. Mulak, dr. J. Pieniqzek, dr. A. Stanoch, dr. M. Wiejowski.
(PNEUMOTHORAX, ARTIFICIAL, statist.)

MURCZYNSKA, W. Z.

Murczynska, W. Z.: hem-agglutination by E. coli strains, Journal 1, 1951,
103 p. New York, 1951, 55, Wars, 1951.

MURCZYNSKA, Wanda

Allergy and immunity in guinea pigs repeatedly vaccinated with BCG. Gruslica 23 no.4:217-225 Apr '55.

1. Z Zakładu Mikrobiologii Pomorskiej A.M. w Szczecinie
Kierownik: doc.dr. Wanda Muczynska Szczecin, ul. Przybyszewskiego 3.

(BCG VACCINATION, effects,

on allergy & immun.in repeatedly vaccinated guinea pigs)

(TUBERCULIN REACTION

eff. of BCG vacc. in guinea pigs after repeated vacc.
on allergy & sensitivity)

MURCZYŃSKA, W. Z

EXCERPTA MEDICA Sec.4 Vol.10/1 Microbiology Jan 57

124. MURCZYŃSKA W. and ANDRZEJEWSKI J. Z. Zakł. Microbiol. Pomorskiej A.M., Szczecin. *Alergia i odporność u świnek morskich wielokrotnie szczepionych BCG. Allergy and immunity in guinea-pigs repeatedly vaccinated with BCG GRUŹLICA 1956, 24/4 (239-246) Tables 2 illus. 1

Two experiments were carried out on guinea-pigs vaccinated with BCG. In both experiments the animals vaccinated with repeated doses of BCG and the animals vaccinated once were compared with the control groups which were not vaccinated and were infected at the same time as the vaccinated animals. In experiment I, the repeated s.c. vaccination had a desensitizing effect. All guinea-pigs, except 2 were infected after the post-vaccination allergy disappeared. The survival time of the BCG-vaccinated animals was twice as long as that of the controls. No difference as to survival was observed between the repeatedly vaccinated and once vaccinated animals. A delay in the development of tuberculous process was observed in the repeatedly vaccinated animals as compared with the once vaccinated. The enlargement of contralateral inguinal lymph nodes was considered as an index. In experiment II, the guinea-pigs were vaccinated orally, and were infected when part of them became tuberculin-positive. The animals were sacrificed on the 80th days after the infection. It was found that the lesions in the vaccinated animals were less extensive than in the controls, the least extensive lesions being in the repeatedly vaccinated animals. Similar to experiment I, the enlargement of the contralateral inguinal lymph nodes was delayed in repeatedly vaccinated animals. Differences in the course of tuberculous infection between the guinea-pigs infected at the time of tuberculin allergy and those infected after the disappearance

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CONT

of tuberculin allergy were found. A case is described which confirms the possibility of development of positive energy in man. (XV, 4)

MURCZYNSKA, Wanda; GREC, Stefan; KRYGIER, Aleksandra; TUSTANOWSKI, Stanislaw;
DWORAK, Wlodzimierz

Early immunological reactions in tuberculosis studied with bacilli
labeled with the isotope P32. Gruzlica 29 no.10:841-890 0 '61.

1. Z Zakladu Mikrobiologii PAM w Szczecinie Kierownik: prof. dr
W.Murczynska Z Orodka Izotopowego PAM w Szczecinie Kierownik: prof.
dr C.Murczynski Z Zakladu Anatomii Patologicznej PAM w Szczecinie
Kierownik: prof. dr K.Stojalowski.

(MYCOBACTERIUM TUBERCULOSIS) (PHOSPHORUS radioactive)
(TUBERCULIN REACTION)

MURCZYŃSKI, Czesław, MIKOŚCZA, Henryk, GREG, Stanisław, SYPNIŃSKA, Maria,
TUSTANOWSKI, Stanisław, NAROŻNIK, Kacimierz.

Use of radiolabeled substrates for the determination of pulmonary ventilation disorders. *Journal of Applied Physiology*. 1974; 36: 101-107.

1. Z Zakładu Radiologii (Kierownik dr. J. Gr. Maciejewski)
z Zakładu Fizyki (Kierownik dr. H. Mikulski) PAM - Szpitala.

*

MURCZYNSKI, Czesław; MIKOSZA, Henryk; GREC, Stefan; SYPIŃSKA, Maria;
TUSTANOWSKI, Stanisław; NAROZNIK, Kazimierz

Respiratory function tests with thulium-170. Pol. arch. med.
wewnet. 34 no.6:732-735 '64

1. Z Zakładu Radiologii Pomorskiej Akademii Medycznej w
Szczecinie (Kierownik: prof. dr. Cz. Murczynski) i z Zakładu
Fizyki Pomorskiej Akademii Medycznej w Szczecinie (Kierownik:
dr. inż. H. Mikosza).

MURCZYNSKI, Czesław, prof. dr (Szczecin, ul. Przybyszewskiego 3)

Present state of radiology. Polski tygod. lek. 9 no.21:641-646
24 May 54.

(RADIOLOGY,
progr.)

MURCZYNSKI
EXCERPTA MEDICA Sec 11 Vol. 11/8 O.R.L. Aug 58

1319. THE MORPHOGENESIS OF THE FRONTAL SINUSES - Zagadnienia morfogenezy zatok czołowych w diagnostyce radiologicznej - Murczynski C. and Sypniewska M. Zakł. Radiol. PAM, Szczecin - POL. PRZEGL. RADIOL. 1957, 21/2 (81-89) Graphs 1 Illus. 6

Planimetric measurement of the frontal sinuses on nearly 1200 X-ray pictures was carried out in the in- and out-patients of the X-ray department. This was done to find a possible correlation between the degree of pneumatization of the frontal bone and a pathological condition or anomalies of different organs. The most important findings were those showing such correlation in connection with lung pathology. In bronchogenic lung cancer small frontal sinuses are prevalent and the mean of pneumatization is 25 % lower than the general mean. A complete absence of frontal sinuses and a very large pneumatization are equivalent to signs of status dysraphicus. In older females the frontal sinuses diminish in size. The authors point to other observations requiring further research on the basis of data so far elaborated. (XIV, 11)

MURCZYNSKI, Czesław; SYPNIEWSKA, Maria

Clinical significance of radiation fibrosis. Polski tygod. lek.
14 no.11:478-482 16 Mar 59.

1. (Z Zakładu Radiologii Pom. Akademii Medycznej w Szczecinie; kier:
prof. dr. Cz. Murczynski) Szczecin, Unii Imbelskiej 1, Państw. Szpital
Kliniczny.

(PULMONARY FIBROSIS, etiol. & pathogen.

radiother. (Pol))

(RADIOTHERAPY, inj. eff.

pulm. fibrosis (Pol))

YEFIMOV, V.M.; LILLE, Yu. [Lille, J.]; PIYK, E. [Piik, E.]; ~~TUL'P, M. [Tulp, M.]~~
~~MURD, A.~~

Results of the heat treatment of Estonian shales in a small test ga.
generator. Khim. i tekhn.gor.slant. i prod. ikh perer. no.12:90-105 '63.
(MIRA 17:2)

LILLE, Yu. [Lille, J.]; MURD, A.; KUNDEL', Kh. [Kundel, H.]

Chromatographic methods of determining the content of higher hydrocarbons
in shale household gas. Khim. i tekhn.gor.slant. i prod. ikh perer. no.12:
142-151 '63. (MIRA 17:2)

LILLE, Yu.E. [Lille, J.]; MURD, A.G.; KUNDEL', Kh.A. [Kundel, H.]

Composition of shale phenols boiling at a temperature up to 300°C and obtained from the tar of various aggregates of the thermal processing of oil shales. Khim. i tekhn. gor. slan. i prod. ikh perer no.13:265-276 '64. (MIRA 18:9)

MURDASOV, A.V.

~~Source: [illegible]~~

Increasing output in the abrasive cleaning of metals. Steel 2, no. 2,
154-155 F '64. 'GPR 1749

1. Ural'skiy filial Vsesoyuznogo nauchno-issledovatel'skogo instituta
abrazivov i snlifovaniya.

S/133/62/000/006/008/015
A054/A127

AUTHORS: Murdasov, A. V., Grigor'yev, Yu. P.

TITLE: The optimum pressure applied to the grinding wheel in polishing metals

PERIODICAL: Stal', no. 6, 1962, 541

TEXT: Tests were carried out at the Chelyabinskiy metallurgicheskiy zavod (Chelyabinsk Metallurgical Plant) to determine the optimum pressure for grinding wheels. In these tests, 1X18H9T (1Kh18N9T) grade steel was polished with 3 125CT 3B (E125ST3B) type, 300 x 40 x 75 mm size wheels, having the same hardness and volumetric weight, while radial forces of 40, 65 and 95 kg were applied. It was found that when the radial forces increased, the consumption of the grinding wheels rises beyond their productivity. When the radial force is increased from 40 to 95 kg, the quantity of metal removed will be raised from 61 to 196 gr/min, while the consumption of wheels rises from 35 to 169 gr/min. Thus, the specific output of the wheels (i.e. the quantity of metal polished off per unit weight of the wheel) is reduced by a factor of more than 1.5. The tests and cal-

Card 1/2

The optimum pressure...

culations showed that applying radial forces between 40 and 80 kg reduces the initial costs of the process. Although the specific output of the wheels decreases in this case and consequently the consumption of wheels will be higher, the increased output saves money owing to less labor being required for the process for polishing per unit weight of the metal. At the Chelyabinsk Metallurgical Plant, the E125ST3B grinding wheels are operated at a pressure of 60 - 65 kg, which increases the productivity of the process by 35 - 50%. There are 2 figures.

ASSOCIATION: UralVNIASH

S/133/62/000/006/008/015
A054/A127

Card 2/2

MURDASOV, A.V.; PASECHNIK, V.K.

Efficient performance of abrasive wheels for the cleaning of high-alloy steel. Metallurg 8 no.9:35-36 S '63. (MIRA 16:10)

1. Ural'skiy vsesoyuznyy nauchno-issledovatel'skiy institut abrazivov i shlifovaniya i Zlatoustovskiy metallurgicheskiy zavod.

(Grinding wheels) (Metal cleaning)

MELAMED, V.I., kand. tekhn. nauk; MURDASOV, A.V., inzh.

Effect of the unbalance of the grinding wheel and the gap in spindle bearings of a grinding machine on the finish of the machined surface.
Vest. mashinostr. 44 no.10:64-66 0 '64.
(MIRA 17:11)

MURDASOV, A.V.; KHSHIVO, L.N.

Technique for examining small particles under the microscope
in three projections. Zav. lab. 31 no.1:124-125 '65.

(MIRA 18:3)

1. Ural'skiy filial Vsesoyuznogo nauchno-issledovatel'skogo
instituta abrazivov i shlifovaniya.

MURDASOV, A.V., inzh.

Effect of the height of a grinding wheel on its performance.
Vest.mashinostr. 45 no.11:69-70 H '65.

(MIRA 18:12)

GIGAURI, V.S.; OVCHINNIKOV, G.S.; MURDASOVA, I.V.

Clinical and experimental experience in the use of the RN-59
respiratory apparatus. Trudy 1-go MMI 33:226-231 '64.

(MIRA 18:3)

BEZRUKOV, P.L.; MURDMAA, I.O.

Bottom sediments in the northern Kurile area. Trudy Inst.ocean.
36:169-190 '59. (MIRA 15:4)
(Kurile Islands region--Deep-sea deposits)

Papers submitted for the 10th Pacific Science Congress, Honolulu, Hawaii 21 Aug-6 Sep 1961.

[illegible]

DUBININ, M.M.; ZHUKOVSKAYA, Ye.G.; MURDMAA, K.C.

Adsorption properties and secondary porous structure of adsorbents having molecular sieve effect. Report No.5: Maximum adsorption volumes of dehydrated crystals of type X synthetic zeolites. Izv. AN SSSR. Otd.khim.nauk no.5:760-769 My '62. (MIRA 15:6)

1. Institut fizicheskoy khimii AN SSSR.
(Zeolites)

S/062/62/000/006/001/008
B117/B101

AUTHORS: Dubinin, M. M., Zhukovskaya, Ye. G., and Murdmaa, K. O.

TITLE: Study of adsorption properties and secondary pore structure of adsorbents with molecular screen effect. Communication 6. Adsorption of nitrogen and water vapors on X-type zeolites, and the potential theory of adsorption

PERIODICAL: Akademiya nauk SSSR. Izvestiya. Otdeleniye khimicheskikh nauk, no. 6, 1962, 960 - 968

TEXT: *Adsorption isotherms of nitrogen vapor (at -195°C) and water vapor (at 20°C) on dehydrated X type zeolites, in sodium and calcium form, were studied at $1 \cdot 10^{-3}$ - $5 \cdot 10^{-1}$ mm Hg. Discussion of the results is based of author's potential theory (Zh. fiz. khimii, 21, 1351 (1947); ibid. 23, 1129 (1949); Chem. Revs. 60, 235 (1960)). Results: (1) The X type zeolites belong to the first structural type (Dokl. AN SSSR, 151, 865 (1960)). Therefore, the equation for the adsorption isotherm developed for finely porous carbon adsorbents applies to it. (2) The limit volumes of the adsorption space practically correspond to the hollow space volumes of the

Card 1/2

S/062/62/000/012/001/007
B101/B186

AUTHORS: Dubinin, M. M., Zhukovskaya, Ye. G., Murdman, K. O., and
Polstyanov, Ye. F.

TITLE: Study on adsorption properties and secondary pore structures
of adsorbents with a molecular sieve effect. Communication
VII. Volumes of the cavities of dehydrated crystals of
synthetic A and X zeolites, which are filled by vapor
adsorption of various substances

PERIODICAL: Akademiya nauk SSSR. Izvestiya. Otdeleniye khimicheskikh
nauk, no. 12, 1962, 2113-2121

TEXT: The isothermal lines of the sorption of water at 20°C, nitrogen at
-195°C, and benzene at 20°C were plotted for NaA, CaA, NaX, and CaX
zeolites to determine the characteristic adsorption values. The adsorption
volumes were determined: (1) by calculation from the isothermal equation
(Izv. AN SSSR, Otd. khim. n., 1958, 1165), developed on the basis of the
potential theory of adsorption; (2) by determining graphically the
characteristic equilibrium pressure p_0 for each vapor before capillary
Card 1/3

Study on adsorption properties and ...

S/062/62/000/012/001/007
B101/B186

condensation sets in. The values (v^0) obtained in two different ways were consistent (in cm^3/g): with H_2O at 20°C 0.269 - 0.272 for NaA, 0.279-0.283 for CaA, 0.323 - 0.338 for NaX, 0.355 - 0.360 for CaX; with N_2 at -195°C 0.287 for CaA, 0.336 - 0.340 for NaX, 0.349 - 0.350 for CaX, and with C_6H_6 at 20°C 0.293 - 0.297 for NaX, and 0.300 - 0.301 for CaX.

Calculation of the number n of unit cells with the composition $z[y\text{Na}_2\text{O} \cdot (1 - y)\text{H}_2\text{O} \cdot \text{Al}_2\text{O}_3 \cdot x\text{SiO}_2]$ and the molecular weight M per unit weight of the zeolite crystal gave: for NaA: $x = 2.06$, $y = 0.93$, $z = 5.91$,

$M = 1683$, $n \cdot 10^{-20}/\text{g} = 3.58$; for CaA: $x = 2.06$, $y = 0.93$, $z = 5.91$,

$M = 1654$, $n \cdot 10^{-20}/\text{g} = 3.64$; for NaX: $x = 2.96$, $y = 0.964$, $z = 38.71$,

$M = 13171$, $n \cdot 10^{-20}/\text{g} = 0.457$; for CaX: $x = 2.96$, $y = 0.964$, $z = 38.71$,

$M = 12950$, $n \cdot 10^{-20}/\text{g} = 0.465$. The volume of the cavities filled during maximum adsorption, calculated from $v_c = v^0/n$, has the following values:

Card 2/3

45147

5.1105

S/076/63/037/002/013/018
B144/B180

AUTHORS: Dubinin, M. M., Zhukovskaya, Ye. G., Murdmaa, K. O. (Moscow)

TITLE: Specific surface area of finely-porous adsorbents.
II. Uselessness of adsorption methods for determining the
specific surface area of finely-porous adsorbents

PERIODICAL: Zhurnal fizicheskoy khimii, v. 37, no. 2, 1963, 426-432

TEXT: Based on previous work (Zh. fiz. khimii, 36, 1806, 1962) the adsorption isotherms on fully dehydrated synthetic CaA, NaX and CaX zeolite crystals were determined for nitrogen vapors at -195°C and for water at 20°C . The specific surface area values derived from the BET and Langmuir adsorption isotherm equations were similar. The specific surface areas were also calculated from the formulas $S = a_m N \omega$, where a_m is the capacity of the monolayer and N the Avogadro number, and $\omega = 4 \cdot 0.866 (M/4\sqrt{2}N_q)^{2/3}$, where M is the molecular weight and q the volume density of the liquid phase. ω was $16.2 \text{ \AA}$ for nitrogen and $10.3 \text{ \AA}$

Card 1/2

Specific surface area of ...

S/076/63/037/002/013/018
B144/B180

for water. The experimental surface areas did not differ much for nitrogen and water, but those obtained from the x-ray data by formal calculation were about 50% higher. These differences are not due to the application of the BET equation in the special forms where n is 1 or ∞ , but to the fact that neither the BET nor the Langmuir equation permit an estimate of adsorption, other than that based on the occupied volume of the zeolite pores. It is emphasized that the specific surface area concept is neither necessary nor desirable for finely-porous adsorbents such as zeolites, activated carbon, etc. There are 6 figures and 3 tables.

ASSOCIATION: Institut fizicheskoy khimii Akademii nauk SSSR (Institute of Physical Chemistry of the Academy of Sciences USSR)

SUBMITTED: December 29, 1961

Card 2/2

L 16293-65 EWT(m)/T Pb-4

ACCESSION NR: AP4045793

S/0062/64/000/009/1565/1573

AUTHOR: Dubinin, M. M.; Zhdanov, S. P.; Zhukovskaya, Ye. G.; Murdmaa, K. O.; Polstyanov, Ye. F.; Sakavov, I. Ye.; Shishakov, N. A. ^B

TITLE: Investigation of the adsorption properties and secondary porous structure of adsorbents having molecular sieve functions. Communication 9. Parameters of the elementary crystal cells and adsorption capacity of synthetic type A zeolites 1

SOURCE: AN SSSR, Izv. Seriya khimicheskaya, no. 9, 1964, 1565-1573

TOPIC TAGS: adsorptive property, secondary porous structure, adsorbent, molecular sieve, elementary crystal cell parameter

ABSTRACT: Experimental data was obtained and calculations were made to evaluate the effect of the a_{0A} parameters of the cubic elementary crystal cells on the volume of the major cavities and on the adsorption capacity of type A zeolite crystals and to attempt to explain the role of the minor cavities in water adsorption by zeolites of this type. In calculating the volume of the major cavities

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L 16293-65

ACCESSION NR: AP4045793

of type A zeolites, based on x-ray structural data, it was necessary to take into account the parameters of the elementary crystal cells (a_{0A}). The following relationships were found to be quite accurate for obtaining values for the volume of the major cavity: $V_{mA} = 200.0a_{0A} - 1688\text{\AA}^3$, or $V_{mA} = 417.9a_{0A} - 4373\text{\AA}^3$. Thus the calculated volume and the experimental adsorption capacity increased noticeably as the elementary crystal cell parameter increased. Experimental data on the equilibrium adsorption of water by NaA crystalline zeolites at 20-100°C and equilibrium relative pressures of 5×10^{-3} - 2×10^{-1} fully confirm the potential theory of adsorption. Approximately 24 water molecules were adsorbed in a major cell of the type A zeolite. Based on its geometry, a minor cavity could contain 2-3 water molecules, but based on experimental data, adsorption of water in previously dehydrated crystals of NaA zeolite takes place only in the major cavity. Thus the role of the minor cavities in water adsorption is still to be established. "The authors thank Ye. N. Yegorov for chemical analysis of the zeolite samples and N. G. Yl'ko for conducting individual experiments." Orig. art. has: 7 tables, 2 figures and 5 equations.

Card 2/3

L 16293-65
ACCESSION NR: AP4045793

ASSOCIATION: Institut fizicheskoy khimii Akademii nauk SSSR (Institute of Physical Chemistry Academy of Sciences SSSR) ; Institut khimii silikatov Akademii nauk SSSR (Institute of Silicate Chemistry Academy of Sciences SSSR)

SUBMITTED: 29Dec62

ENCL: 00

SUB CODE: GC

NO REF SOV: 004

OTHER: 004

Card 3/3

DUBININ, M.M.; ZHDANOV, S.P.; ZHUKOVSKAYA, Ye.G.; MURDMAA, K.O.; POLSTYANOV, Ye.F.; SAKAVOV, I.Ye.; SHISHAKOV, N.A.;

Adsorption properties and the secondary porous structure of adsorbents having molecular sieve action. Report No.9: Parameters of elementary crystalline cells and the limiting adsorptive volumes of A-type synthetic zeolites. Izv.AN SSSR.Ser.khim. no.9:1565-1573 S '64. (MIRA 17:10)

Adsorption properties and the secondary porous structure of adsorbents having molecular sieve action. Report No.10: Composition, adsorptive properties, and the limiting adsorptive volumes of X-type synthetic zeolites. Ibid.:1573-1580

1. Institut fizicheskoy khimii AN SSSR i Institut khimii silikatov AN SSSR.

L 16157-65 EWT(m)/T P6-4 SSD/AFWL/AS(mp)-2
ACCESSION NR: AP4045794 S/0062/64/000/009/1573/1580

AUTHOR: Dubinin, M. M.; Zhdanov, S. P.; Zhukovskaya, Ye. G.; Murdmaa, K. O.; Polstyanov, Ye. F.; Sakavov, I. Ye.; Shishakov, N. A.

TITLE: Investigation of the adsorption properties and the secondary porous structure of adsorbents functioning as molecular sieves. Communication 10. Composition, adsorption properties and limiting adsorption volume of type X synthetic zeolites

SOURCE: AN SSSR. Izv. Seriya khimicheskaya, no. 9, 1964, 1573-1580

TOPIC TAGS: type X zeolite, synthetic zeolite, adsorption, porous structure, molecular sieve, isomorphic substitution, elementary cell parameter, adsorption isotherm

ABSTRACT: The effect of varying compositions of the aluminosilicate skeleton of type X synthetic zeolites on the volume of the major cavities and the adsorption properties of the zeolites was determined. In the type X zeolites the $\text{SiO}_2/\text{Al}_2\text{O}_3$ ratio (x) may be varied from 2.2 to 3.3 due to the isomorphic substitution of the

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L 16157-65
ACCESSION NR: AP4045794

3

Al ions by Si ions. The parameter of the cubic elementary crystal cell was determined from x-ray data; the radius of the structural unit corresponded to the relationship $r_x = 6,406 - 0,060(x-2,00)$, with x varied from 2.2 to 3.3. Thus the volume of the major cavity decreased as the zeolite was enriched in Si, but the number of elementary cells per unit mass of dehydrated zeolite increased. The volume of the major cavities per unit mass of crystals was practically independent of the zeolite composition. The adsorption isotherms and the limiting adsorption volumes for NaX zeolites were determined for water, benzene, n-pentane, cyclohexane and pyridine at 20C and for nitrogen at -196C. The limiting adsorption volume of the zeolites for H₂O and N₂ was also practically independent of the NaX zeolite composition, and corresponded to the calculated values of the major cavities. Under low equilibrium pressures the adsorption of the dipolar and quadrupolar molecules (water and nitrogen) decreased proportionally to the enrichment of the NaX zeolite with Si; this was attributed to the decreasing number of ion exchange cationites in the cavities due to substitution of Si for NaAl in the aluminosilicate skeleton. "The authors thank Ye. N. Yegorov for chemical analysis of the zeolites. B. A. Lipkind for supplying zeolite sample and N. G. Ul'ko for

Card 2/3

L 16157-65

ACCESSION NR: AP4045794

2

conducting individual tests. Orig. art. has: 5 tables, 2 figures and 4 equations

ASSOCIATION: Institut fizicheskoy khimii Akademii nauk SSSR (Institute of Physical Chemistry Academy of Sciences SSSR); Institut khimii silikatov Akademii nauk SSSR (Institute of Silicate Chemistry Academy of Sciences SSSR)

SUBMITTED: 29Dec62

ENCL: 00

SUB CODE: GC, GP

NO REF SOV: 006

OTHER: 000

Card 3/3

L 1125-66 EIT(m)/T

ACCESSION NR: AP8022138

UR/0062/65/000/000/1500/1502

541.183+546.284

AUTHOR: Dubinin, M. N.; Zhukovskaya, Ye. G.; Luk'yanovich, V. N.; Kordas, K. O.;
Polguyarov, Ye. I.; Shtedrov, L. E.

TITLE: Adsorption volumes of synthetic mordenites

SOURCE: AN SSSR. Izvestiya. Seriya khimicheskaya, no. 8, 1965, 1500-1502

TOPIC TAGS: molecular sieve, synthetic zeolite, mordenite

ABSTRACT: Adsorption (pore) volumes of sodium and hydrogen forms of synthetic mordenite were determined in order to check them against the corresponding values calculated on the basis of X-ray analysis. For comparison, also H-Zeolon (product of Norton Company) was examined. The saturation volumes of Na and H synthetic mordenites were determined from water vapor isotherm at 20°C, nitrogen and argon isotherms taken at -196°C, and from sorption and desorption isotherms for benzene taken at 20°C and various pressures. For all mordenites an excellent agreement was found between the calculated pore volumes and the values obtained from water vapor, nitrogen, and argon adsorption measurements, while benzene adsorption gave values for the pore volumes that were too low. This was due to the fact that the small cavities in the

Card 1/2

L 1125-66

ACCESSION NR: AP5022938

wordenite tube-like channels were inaccessible to benzene. It was concluded that only the channels with openings made of oxygen rings containing 12 atoms are accessible to benzene. Orig. art. has: 2 figures, 2 tables. 6

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